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THANGAVELU, KANDASAMY	
ART UNIT	PAPER NUMBER
2123	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	09/270,128	MILLER, THOMAS R.	
	Examiner	Art Unit	
	KANDASAMY THANGAVELU	2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 May 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 March 1999* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Introduction

1. This communication is in response to the Applicants' pre-appeal brief request for review dated May 5, 2008. Claims 1-27 of the application are pending and rejected. This office action is made non-final.

Prosecution reopened

2. In view of the pre-appeal brief request for review dated May 5, 2008, PROSECUTION IS HEREBY REOPENED as set forth below.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

3.1 The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1, 10, 16, 20, 22-24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Huang et al.** (U.S. Patent 6,151,582), in view of **Blitz** (U.S. Patent 6,047,293), and further in view of **Rumbaugh et al.** (Object oriented modeling and Design, 1991).

4.1 **Huang et al.** teaches Decision support system for the management of an agile supply chain. Specifically, as per Claim 1, **Huang et al.** teaches a simulation system used by an operator and including a source of input data, a display (Col 96, Lines 35-37; Col 96, Lines 57-58), and a simulator adapted to be executed by a processor and generating a set of simulation results during the execution in response to the input data (Col 95, Lines 63-64; Col 96, Lines 18-28) and;

an organizing and managing system operatively interconnected between the source of input data and the simulator and the display (Col 94, Lines 42-45: Scenario manager); comprising:

a case manager adapted for storing a plurality of sets and supersets of test data file, wherein each set and superset is a test data file, each superset defining a case scenario of its related set (Fig. 52; Col 94, L42-45: scenario manager; scenarios contain edited data, results of analysis, graphs, charts and performance metrics; the edited data are interpreted as test data file;

Col 96, L43-48: decision and parameter settings; parameter settings will be displayed in the editable screens; these screens will be accessible during simulation run so the user can interrupt the simulation and modify the parameters interactively; the examiner interprets the parameters to constitute the test data); for performing a simulation (Col 95, Lines 63-64: supply chain wide performance simulator to monitor the effects due to the system dynamics);

one or more of the sets and the supersets of the test data files adapted to be selected by the operator (Col 95, Lines 2-4);

editing means responsive to the one or more of the sets and the supersets of the test data files selected by the operator via the case manager and responsive to the input data for editing the test data files and the input data in response to editing actions taken by the operator and generating a set of edited test data files (Col 96, Lines 44-45 and Col 94, Lines 41-45); and

the simulator generating the set of simulation results during the execution of the simulator in response to the set of edited test data files (Col 95, Lines 63-64; Col 96, Lines 35-37 and Col 96, Lines 57-58).

Huang et al. does not expressly teach test data files being stored in the form of a hierarchical, tree like structure, having a root and one or more leaves. **Blitz** teaches test data files being stored in the form of a hierarchical, tree like structure (Abstract, L2-11: storage and searching of parameter data used for testing; the data manager storing nested levels of data in the form of a binary tree; Abstract, L14-18: each container has a search mode which searches the tree for the named data; Fig. 4: shows the tree structure of test data; Figs 7 and 8: show the tree structure of data; Col 5, L54-56: the Excel spreadsheets contain all the data required for a test;

the data need to be stored in the data manager in such a way that it may be retrieved quickly and accurately; Col 6, L55-66: graphical illustration of nested data; nested tree in the data manager; each data has a specific location in the tree determined by the layout rules of the binary tree; Col 7, L20-23 and 26-37). It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the organizing and managing system of **Huang et al.** with the organizing and managing system of **Blitz** that included test data files being stored in the form of a hierarchical, tree like structure because that would allow rapid searching and retrieval of data quickly and accurately (Col 2, L46-47; Col 5, L55-56); tree like structure, having a root and one or more leaves (inherent).

Huang et al. and **Blitz** do not expressly teach the test data files being stored in the form of a non-conventional tree like structure, the tree like structure being non-conventional in that one or more of the supersets underlie corresponding ones of the sets in the tree like structure, such that one or more of the sets is situated between the root and the corresponding superset. **Rumbaugh et al.** teaches the test data files being stored in the form of a non-conventional tree like structure, the tree like structure being non-conventional in that one or more of the supersets underlie corresponding ones of the sets in the tree like structure, such that one or more of the sets is situated between the root and the corresponding superset (Page 39, Para 3 and Para 5; Fig. 3.23; while **Rumbaugh et al.** depicts a subclass below its corresponding class, the subclass can derive information from higher class as shown in Figure 3.23; the subclass contains more information than the class or superclass above it; the subclass forms a superset (having more data) of the class or superclass (having less data) above it, while the class or superclass forms a set; as one goes down the class structure, more and more data is available to the lower classes,

thus they forming supersets of the classes or superclasses (sets) above them; there is also no constraint in the database to the amount of data in various sets and supersets and the type of data in the sets and supersets). It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the organizing and managing system of **Huang et al.** and **Blitz** with the organizing and managing system of **Rumbaugh et al.** that included the test data files being stored in the form of a non-conventional tree like structure, the tree like structure being non-conventional in that one or more of the supersets underlie corresponding ones of the sets in the tree like structure, such that one or more of the sets is situated between the root and the corresponding superset because that would allow sharing similarities among sets, while preserving their differences (Page 38, Para 4) and modeling by structuring the sets and would be helpful for reusing the sets (Page 41, Para 3).

4.2 As per Claim 10, **Huang et al.** teaches in a simulation system used by an operator, a method for generating a set of simulation results in response to a set of input data and displaying (Col 96, Lines 35-37; Col 96, Lines 57-58); the set of simulation results (Col 95, Lines 63-64; Col 96, Lines 18-28);

the sets of the data and the supersets of the data adapted to be selected by the operator (Fig. 52; Col 95, Lines 2-4);

generating the sets of the data from the case manager storage medium when the sets of data are selected by the operator (Col 94, Lines 42-45); and

submitting the sets of data to a simulator in response to the generating step, the simulator executing and generating the set of simulation results (Col 95, Lines 63-64), in response to the

sets of data and displaying the set of simulation results (Col 96, Lines 35-37 and Col 96, Lines 57-58).

Huang et al. further teaches storing the input data in a case manager storage medium the input data including a plurality of sets of data and a plurality of supersets of the data, the sets of the data and the supersets of the data being stored in the case manager storage medium; wherein each set and superset is a test data file, each superset defining a case scenario of its related set (Col 94, L42-45: scenario manager; scenarios contain edited data, results of analysis, graphs, charts and performance metrics; the edited data are interpreted as test data file; Col 96, L43-48: decision and parameter settings; parameter settings will be displayed in the editable screens; these screens will be accessible during simulation run so the user can interrupt the simulation and modify the parameters interactively; the examiner interprets the parameters to constitute the test data), for performing a simulation (Col 95, Lines 63-64: supply chain wide performance simulator to monitor the effects due to the system dynamics).

Huang et al. does not expressly teach storing the input data in the form of a hierarchical, tree like structure, having a root and one or more leaves. **Blitz** teaches storing the input data in the form of a hierarchical, tree like structure (Abstract, L2-11: storage and searching of parameter data used for testing; the data manager storing nested levels of data in the form of a binary tree; Abstract, L14-18: each container has a search mode which searches the tree for the named data; Fig. 4: shows the tree structure of test data; Figs 7 and 8: show the tree structure of data; Col 5, L54-56: the Excel spreadsheets contain all the data required for a test; the data need

to be stored in the data manager in such a way that it may be retrieved quickly and accurately; Col 6, L55-66: graphical illustration of nested data; nested tree in the data manager; each data has a specific location in the tree determined by the layout rules of the binary tree; Col 7, L20-23 and 26-37), having a root and one or more leaves (inherent).

Huang et al. and **Blitz** do not expressly teach the sets of the data and the supersets of the data being stored in the form of a hierarchical, non-conventional tree like structure, the tree like structure being non-conventional in that supersets underlie corresponding ones of the sets in the tree like structure, such that one or more of the sets is situated between the root and the corresponding superset. **Rumbaugh et al.** teaches the sets of the data and the supersets of the data being stored in the form of a hierarchical, non-conventional tree like structure, the tree like structure being non-conventional in that supersets underlie corresponding ones of the sets in the tree like structure, such that one or more of the sets is situated between the root and the corresponding superset (Page 39, Para 3 and Para 5; Fig. 3.23).

4.3 As per Claim 16, Huang et al. teaches a device, comprising means for storing instructions which are executable by a processor of a computer, the instructions adapted for use by a simulation system for generating a set of simulation results in response to a selected set of data and displaying the set of simulation results (Col 96, Lines 35-37; Col 95, Lines 63-64 and Col 96, Lines 57-58); said instructions when executed by said processor of said computer conducting a process comprising the steps of:

presenting for display a plurality of sets of data and a plurality of supersets of said data wherein each set and superset is a test data file, each superset defining a case scenario of its

related set (Fig. 52; Col 94, L42-45: scenario manager; scenarios contain edited data, results of analysis, graphs, charts and performance metrics; the edited data are interpreted as test data file; Col 96, L43-48: decision and parameter settings; parameter settings will be displayed in the editable screens; these screens will be accessible during simulation run so the user can interrupt the simulation and modify the parameters interactively; the examiner interprets the parameters to constitute the test data); for performing a simulation (Col 95, Lines 63-64: supply chain wide performance simulator to monitor the effects due to the system dynamics);

presenting for display an editing means when the plurality of sets of data or the plurality of supersets of data are selected by the operator the data adapted to be edited by the operator via editing means on the display thereby generating edited data (Col 96, Lines 44-45 and Col 94, Lines 44-46); and

submitting the edited data to a simulator when the data is edited by the operator via the editing means on the display (Col 95, Lines 63-64 and Col 96, Lines 35-37).

Huang et al. does not expressly teach presenting for display a hierarchical tree like structure representing a plurality of sets of data and a plurality of supersets of said data having a root and one or more leaves; the plurality of sets of data and the plurality of supersets of data adapted to be selected by an operator via the tree like structure on the display. **Blitz** teaches presenting for display a hierarchical tree like structure representing a plurality of sets of data and a plurality of supersets of data; the plurality of sets of data and the plurality of supersets of data adapted to be selected by an operator via the tree like structure on the display (Abstract, L2-11: storage and searching of parameter data used for testing; the data manager storing nested levels

of data in the form of a binary tree; Abstract, L14-18: each container has a search mode which searches the tree for the named data; Fig. 4: shows the tree structure of test data; Figs 7 and 8: show the tree structure of data; Col 5, L54-56: the Excel spreadsheets contain all the data required for a test; the data need to be stored in the data manager in such a way that it may be retrieved quickly and accurately; Col 6, L55-66: graphical illustration of nested data; nested tree in the data manager; each data has a specific location in the tree determined by the layout rules of the binary tree; Col 7, L20-23 and 26-37); said data having a root and one or more leaves (inherent).

Huang et al. and **Blitz** do not expressly teach a hierarchical, non-conventional tree like structure representing a plurality of sets of data and a plurality of supersets of the data, the tree like structure being non-conventional in that the supersets underlie corresponding ones of the sets in the tree like structure, such that one or more of the sets is situated between the root and the corresponding superset. **Rumbaugh et al.** teaches a hierarchical, non-conventional tree like structure representing a plurality of sets of data and a plurality of supersets of the data, the tree like structure being non-conventional in that the supersets underlie corresponding ones of the sets in the tree like structure, such that one or more of the sets is situated between the root and the corresponding superset (Page 39, Para 3 and Para 5; Fig. 3.23).

4.4 As per Claim 20, **Huang et al.** teaches a simulation system comprising:

a case manager adapted for storing input data therein and organizing said input data in said case manager said input data including a set of data and a corresponding superset of said set of data, wherein each set and superset is a test data file, each superset defining a case scenario of

its related set (Fig. 52; Col 94, L42-45: scenario manager; scenarios contain edited data, results of analysis, graphs, charts and performance metrics; the edited data are interpreted as test data file; Col 96, L43-48: decision and parameter settings; parameter settings will be displayed in the editable screens; these screens will be accessible during simulation run so the user can interrupt the simulation and modify the parameters interactively; the examiner interprets the parameters to constitute the test data); for performing a simulation (Col 95, Lines 63-64: supply chain wide performance simulator to monitor the effects due to the system dynamics);

at least one of the set of data and the corresponding superset of the set of data adapted to be selected by an operator of the case manager (Col 95, Lines 2-4); and

a simulation system, comprising a simulator responsive to the at least one of the set of data and the corresponding superset of the sets of data which is selected by the operator in the case manager adapted for executing and using, during the execution, the at least one of the set of data and the corresponding superset of the set of data thereby generating a set of simulation results (Col 95, Lines 63-64 and Col 96, Lines 35-37); and means for displaying or recording the set of simulation results (Col 96, Lines 57-58).

Huang et al. does not expressly teach storing input data and organizing the input data in a hierarchical, tree like structure, having a root and one or more leaves, at least one of the set of data and the corresponding superset of the set of data adapted to be selected by an operator from the tree like structure. **Blitz** teaches a storing input data and organizing the input data in a hierarchical, tree like structure, at least one of the set of data and the corresponding superset of the set of data adapted to be selected by an operator from the tree like structure (Abstract, L2-11:

storage and searching of parameter data used for testing; the data manager storing nested levels of data in the form of a binary tree; Abstract, L14-18: each container has a search mode which searches the tree for the named data; Fig. 4: shows the tree structure of test data; Figs 7 and 8: show the tree structure of data; Col 5, L54-56: the Excel spreadsheets contain all the data required for a test; the data need to be stored in the data manager in such a way that it may be retrieved quickly and accurately; Col 6, L55-66: graphical illustration of nested data; nested tree in the data manager; each data has a specific location in the tree determined by the layout rules of the binary tree; Col 7, L20-23 and 26-37); tree like structure, having a root and one or more leaves (inherent).

Huang et al. and **Blitz** do not expressly teach storing input data therein and organizing the input data in a hierarchical, non-conventional tree like structure, the tree like structure being non-conventional in that the superset of the set of data underlies the set of data in the tree like structure, such that one or more of the sets is situated between the root and the corresponding superset, a superset storing data therein which is also stored in a corresponding set of data but the superset further storing additional data therein which is not stored in the corresponding set of data. **Rumbaugh et al.** teaches storing input data therein and organizing the input data in a hierarchical, non-conventional tree like structure, the tree like structure being non-conventional in that the superset of the set of data underlies the set of data in the tree like structure, such that one or more of the sets is situated between the root and the corresponding superset, a superset storing data therein which is also stored in a corresponding set of data but the superset further storing additional data therein which is not stored in the corresponding set of data (Page 39, Para 3 and Para 5; Fig. 3.23).

4.5 As per Claim 22, **Huang et al.** teaches a device adapted for storing instructions which, when executed by a processor, conducts a process comprising the steps of:

executing a simulator using input data during the execution of the simulator (Col 96, Lines 35-37; Col 95, Lines 63-64);

wherein the step of executing the simulator using the input data includes (a) accessing a case manager, the case manager including at least one set of data and at least one superset of the set of data organized in the case manager wherein each set and superset is a test data file each superset defining a case scenario of its related set (Fig. 52; Col 94, L42-45: scenario manager; scenarios contain edited data, results of analysis, graphs, charts and performance metrics; the edited data are interpreted as test data file; Col 96, L43-48: decision and parameter settings; parameter settings will be displayed in the editable screens; these screens will be accessible during simulation run so the user can interrupt the simulation and modify the parameters interactively; the examiner interprets the parameters to constitute the test data); for performing a simulation (Col 95, Lines 63-64: supply chain wide performance simulator to monitor the effects due to the system dynamics);

(b) selecting, by an operator, either the set of data or the superset of the set of data, the data selected during the selecting step (b) representing the input data used by the simulator during the execution of the simulator (Col 95, Lines 2-4; Col 95, L63-64); and

(c) executing the simulator using the data selected during the selecting step (Col 95, Lines 63-64 and Col 96, Lines 35-37).

Huang et al. does not expressly teach said at least one set and at least one superset being organized in said case manager in a hierarchical, tree like structure, having a root and one or more leaves. **Blitz** teaches said at least one set and at least one superset being organized in said case manager in a hierarchical, tree like structure (Abstract, L2-11: storage and searching of parameter data used for testing; the data manager storing nested levels of data in the form of a binary tree; Abstract, L14-18: each container has a search mode which searches the tree for the named data; Fig. 4: shows the tree structure of test data; Figs 7 and 8: show the tree structure of data; Col 5, L54-56: the Excel spreadsheets contain all the data required for a test; the data need to be stored in the data manager in such a way that it may be retrieved quickly and accurately; Col 6, L55-66: graphical illustration of nested data; nested tree in the data manager; each data has a specific location in the tree determined by the layout rules of the binary tree; Col 7, L20-23 and 26-37); tree like structure having a root and one or more leaves (inherent).

Huang et al. and **Blitz** do not expressly teach the tree like structure being non-conventional in that the superset of the set of data underlies the set of data in the tree like structure, such that one or more of the sets is situated between the root and the corresponding superset, the set of data including a first group of data, the superset of the set of data including the first group of data plus additional data which is not included in the set of data. **Rumbaugh et al.** teaches the tree like structure being non-conventional in that the superset of the set of data underlies the set of data in the tree like structure, such that one or more of the sets is situated between the root and the corresponding superset, the set of data including a first group of data, the superset of the set of data including the first group of data plus additional data which is not included in the set of data (Page 39, Para 3 and Para 5; Fig. 3.23).

4.6 As per Claim 23, **Huang et al., Blitz** and **Rumbaugh et al.** teach the device of Claim 22. **Huang et al.** also teaches that the step of executing the simulator (Col 95, L63-64), using the input data includes editing the data selected during the selecting step creating edited data, the edited data representing the input data used by the simulator during the execution of the simulator (Col 94, Lines 4-45; Col 96, L44-48).

4.7 As per Claim 24, **Huang et al.** teaches a simulation system including a case manager and a simulator operatively connected to said case manager, said case manager including a plurality of sets of data and a corresponding plurality of supersets of data, wherein each set and superset is a test data file, each superset defining a case scenario of its related set (Fig. 22; Col 94, L42-45: scenario manager; scenarios contain edited data, results of analysis, graphs, charts and performance metrics; the edited data are interpreted as test data file; Col 96, L43-48: decision and parameter settings; parameter settings will be displayed in the editable screens; these screens will be accessible during simulation run so the user can interrupt the simulation and modify the parameters interactively; the examiner interprets the parameters to constitute the test data); for performing a simulation (Col 95, Lines 63-64: supply chain wide performance simulator to monitor the effects due to the system dynamics);

a method of performing a simulation, comprising (a) selecting by an operator, at least one of the sets of data or at least one of the supersets of data of the case manager, the selected data being generated from the case manager when the selected data is selected by the operator (Col 94, Lines 42-45 and Col 95, Lines 2-4); and

(b) receiving the selected data, selected by the operator during the selecting step (a) in the simulator and (c) performing by the simulator the simulation, and using by the simulator the selected data which is received in the simulator during the receiving step(b) (Col 95, Lines 63-64 and Col 96, Lines 35-37).

Huang et al. does not expressly teach the plurality of sets of data and plurality of supersets of data being organized together in the form of a hierarchical, tree like structure, having a root and one or more leaves. **Blitz** teaches the plurality of sets of data and plurality of supersets of data being organized together in the form of a hierarchical, tree like structure (Abstract, L2-11: storage and searching of parameter data used for testing; the data manager storing nested levels of data in the form of a binary tree; Abstract, L14-18: each container has a search mode which searches the tree for the named data; Fig. 4: shows the tree structure of test data; Figs 7 and 8: show the tree structure of data; Col 5, L54-56: the Excel spreadsheets contain all the data required for a test; the data need to be stored in the data manager in such a way that it may be retrieved quickly and accurately; Col 6, L55-66: graphical illustration of nested data; nested tree in the data manager; each data has a specific location in the tree determined by the layout rules of the binary tree; Col 7, L20-23 and 26-37); tree like structure having a root and one or more leaves (inherent).

Huang et al. and **Blitz** do not expressly teach the plurality of sets of data and plurality of supersets of data being organized together in the form of a hierarchical, non-conventional tree like structure, each of the sets of data including a group of data, each of the corresponding supersets of data including the group of data plus additional data not included within the

corresponding sets of data, the tree like structure being non-conventional in that the supersets of the set of data underlie the corresponding sets of data in the tree like structure, such that one or more of the sets is situated between the root and the corresponding superset. **Rumbaugh et al.** teaches the plurality of sets of data and plurality of supersets of data being organized together in the form of a hierarchical, non-conventional tree like structure, each of the sets of data including a group of data, each of the corresponding supersets of data including the group of data plus additional data not included within the corresponding sets of data, the tree like structure being non-conventional in that the supersets of the set of data underlie the corresponding sets of data in the tree like structure, such that one or more of the sets is situated between the root and the corresponding superset (Page 39, Para 3 and Para 5; Fig. 3.23).

4.8 As per Claim 26, **Huang et al.** teaches a device adapted for storing instructions and adapted to be disposed in a computer, the instructions adapted to be executed by a processor of the computer when the device is disposed in the computer, the processor performing method steps for performing a simulation in a simulation system when the instructions are executed by the processor of the computer (Col 96, Lines 35-37; Col 95, Lines 63-64);

the simulation system including a case manager and a simulator operatively connected to the case manager, the case manager including a plurality of sets of data and a corresponding plurality of supersets of data organized together in the case manager each of the sets of data including a group of data wherein each set and superset is a test data file each superset defining a case scenario of its related set (Fig. 2; Col 94, L42-45: scenario manager; scenarios contain edited data, results of analysis, graphs, charts and performance metrics; the edited data are

interpreted as test data file; Col 96, L43-48: decision and parameter settings; parameter settings will be displayed in the editable screens; these screens will be accessible during simulation run so the user can interrupt the simulation and modify the parameters interactively; the examiner interprets the parameters to constitute the test data); for performing a simulation (Col 95, Lines 63-64: supply chain wide performance simulator to monitor the effects due to the system dynamics);

the method steps for performing the simulation in the simulation system comprising

(a) selecting by an operator, at least one of the sets of data or at least one of the supersets of data of the case manager, the selected data being generated from the case manager when the selected data is selected by the operator (Col 95, Lines 2-4; Col 95, Lines 63-64); and

(b) receiving the selected data, selected by the operator during the selecting step (a) in the simulator, and

(c) performing by the simulator the simulation and using by the simulator the selected data which is received in the simulator during the receiving step (Col 95, Lines 63-64 and Col 96, Lines 35-37).

Huang et al. does not expressly teach the plurality of sets of data and plurality of supersets of data being organized together in said case manager in the form of a hierarchical, tree like structure, having a root and one or more leaves. **Blitz** teaches the plurality of sets of data and plurality of supersets of data being organized together in said case manager in the form of a hierarchical, tree like structure (Abstract, L2-11: storage and searching of parameter data used for testing; the data manager storing nested levels of data in the form of a binary tree; Abstract,

L14-18: each container has a search mode which searches the tree for the named data; Fig. 4: shows the tree structure of test data; Figs 7 and 8: show the tree structure of data; Col 5, L54-56: the Excel spreadsheets contain all the data required for a test; the data need to be stored in the data manager in such a way that it may be retrieved quickly and accurately; Col 6, L55-66: graphical illustration of nested data; nested tree in the data manager; each data has a specific location in the tree determined by the layout rules of the binary tree; Col 7, L20-23 and 26-37); tree like structure, having a root and one or more leaves (inherent).

Huang et al. and **Blitz** do not expressly teach the plurality of sets of data and plurality of supersets of data being organized together in the form of a hierarchical, non-conventional tree like structure, each of the sets of data including a group of data, each of the corresponding supersets of data including the group of data plus additional data not included within the corresponding sets of data, the tree like structure being non-conventional in that the supersets of the set of data underlie the corresponding sets of data in the tree like structure, such that one or more of the sets is situated between the root and the corresponding superset. **Rumbaugh et al.** teaches the plurality of sets of data and plurality of supersets of data being organized together in the form of a hierarchical, non-conventional tree like structure, each of the sets of data including a group of data, each of the corresponding supersets of data including the group of data plus additional data not included within the corresponding sets of data, the tree like structure being non-conventional in that the supersets of the set of data underlie the corresponding sets of data in the tree like structure, such that one or more of the sets is situated between the root and the corresponding superset (Page 39, Para 3 and Para 5; Fig. 3.23).

5. Claims 2-9, 11-14, 17-19, 21, 25 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Huang et al.** (U.S. Patent 6,151,582), in view of **Blitz** (U.S. Patent 6,047,293) and **Rumbaugh et al.** (Object oriented modeling and Design, 1991), and further in view of **Cowgill** (U.S. Patent 5,835,566).

5.1 As per Claim 2, **Huang et al., Blitz** and **Rumbaugh et al.** teach the organizing and managing system of Claim 1. **Huang et al., Blitz** and **Rumbaugh et al.** do not expressly teach that the editing means comprises a case builder adapted for receiving a first set of keywords associated with the input data and a second set of keywords associated with the one or more of the sets and the supersets of the test data files selected by the operator via the case manager for editing the first set of keywords and the second set of keywords in response to editing actions taken by the operator thereby generating a third set of keywords; and a simulation file adapted for storing the third set of keywords. **Cowgill** teaches that the editing means comprises a case builder adapted for receiving a first set of keywords associated with the input data and a second set of keywords associated with the one or more of the sets and the supersets of the test data files selected by the operator via the case manager for editing the first set of keywords and the second set of keywords in response to editing actions taken by the operator thereby generating a third set of keywords; and a simulation file adapted for storing the third set of keywords (Col 12, Lines 34-37; Fig. 8, Item 820). It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the organizing and managing system of **Huang et al., Blitz** and **Rumbaugh et al.** with the organizing and managing system of **Cowgill** that included the editing means comprising a case builder adapted for receiving a first set of keywords

associated with the input data and a second set of keywords associated with the one or more of the sets and the supersets of the test data files selected by the operator via the case manager for editing the first set of keywords and the second set of keywords in response to editing actions taken by the operator thereby generating a third set of keywords; and a simulation file adapted for storing the third set of keywords because that would provide a user friendly environment so that the user could create test cases and store the cases for execution (Col 12, Lines 38-40).

5.2 As per Claim 3, **Huang et al., Blitz, Rumbaugh et al.** and **Cowgill** teach the organizing and managing system of Claim 2. **Huang et al.** teaches that editing means further comprises a run manager adapted for receiving the third set of keywords from the simulation file and submitting the third set of keywords to the simulator, the simulator using the third set of keywords from the simulation file during its execution by the processor and, responsive thereto, generating the set of simulation results (Col 96, Lines 35-37; Col 96, Lines 18-26).

5.3 As per Claim 4, **Huang et al., Blitz, Rumbaugh et al.** and **Cowgill** teach the organizing and managing system of Claim 3. **Huang et al.** teaches that the display includes a results viewer, the results viewer adapted to display the set of simulation results generated from the simulator (Col 96, Lines 57-58).

5.4 As per Claim 5, **Huang et al., Blitz, Rumbaugh et al.** and **Cowgill** teach the organizing and managing system of Claim 4. **Huang et al., Blitz** and **Rumbaugh et al.** do not expressly teach that the display includes a report generator, the report generator adapted to generate a

report describing the set of simulation results generated from the simulator. **Cowgill** teaches that the display includes a report generator, the report generator adapted to generate a report describing the set of simulation results generated from the simulator (Col 12, Lines 54-58).

5.5 As per Claim 6, **Huang et al., Blitz, Rumbaugh et al.** and **Cowgill** teach the organizing and managing system of Claim 3. **Huang et al., Blitz** and **Rumbaugh et al.** do not expressly teach that the run manager includes monitoring means for monitoring the third set of keywords received from the simulation file. **Cowgill** teaches that the run manager includes monitoring means for monitoring the third set of keywords received from the simulation file (Col 12, Lines 54-58).

5.6 As per Claim 7, **Huang et al., Blitz, Rumbaugh et al.** and **Cowgill** teach the organizing and managing system of Claim 6. **Huang et al., Blitz** and **Rumbaugh et al.** do not expressly teach that the organizing and managing system comprises a results file adapted to be operatively connected to the simulator for receiving the set of simulation results from the simulator and storing the set of simulation results therein, the run manager receiving the third set of keywords from the simulation file and the set of simulation results from the results file thereby allowing the third set of keywords to be compared by an operator with the set of simulation results. **Cowgill** teaches that the organizing and managing system comprises a results file adapted to be operatively connected to the simulator for receiving the set of simulation results from the simulator and storing the set of simulation results therein, the run manager receiving the third set of keywords from the simulation file and the set of simulation results from the results file thereby

allowing the third set of keywords to be compared by an operator with the set of simulation results (Col 12, Lines 54-58 and Col 12, Lines 62-63).

5.7 As per Claim 8, **Huang et al., Blitz, Rumbaugh et al.** and **Cowgill** teach the organizing and managing system of Claim 7. **Huang et al.** teaches that the display includes a results viewer connected to the results file, the results viewer adapted to display the set of simulation results received from the results file (Col 96, Lines 57-58 and Col 94, Lines 45-46).

5.8 As per Claim 9, **Huang et al., Blitz, Rumbaugh et al.** and **Cowgill** teach the organizing and managing system of Claim 8. **Huang et al., Blitz** and **Rumbaugh et al.** do not expressly teach that the display includes a report generator connected to the results file, the report generator adapted to generate a report describing the set of simulation results received from the results file. **Cowgill** teaches that the display includes a report generator connected to the results file, the report generator adapted to generate a report describing the set of simulation results received from the results file (Col 12, Lines 54-58).

5.9 As per Claim 11, **Huang et al., Blitz** and **Rumbaugh et al.** teach the method of Claim 10. **Huang et al.** teaches that the submitting step includes editing a first set of keywords representing the sets of data and generating a second set of keywords representing edited versions of the sets of data (Col 94, Lines 45-46); and the submitting step includes submitting the second set of keywords to the simulator in response to the editing step, the simulator executing

and generating the set of simulation results in response to the second set of keywords (Col 96, Lines 35-37).

5.10 As per Claim 12, **Huang et al., Blitz** and **Rumbaugh et al.** teach the method of Claim 11. **Huang et al.** teaches that displaying step includes storing the set of simulation results which are generated from the simulator, in a results file; and displaying the set of simulation results which are stored in the results file (Col 96, Lines 57-58 and Col 94, Lines 45-46).

5.11 As per Claim 13, **Huang et al., Blitz** and **Rumbaugh et al.** teach the method of Claim 12. **Huang et al., Blitz** and **Rumbaugh et al.** do not expressly teach that the step of storing the set of simulation results in a results file comprises comparing the second set of keywords submitted to the simulator with the set of simulation results stored in the results file and storing the set of simulation results, which are generated from the simulator, in a results file. **Cowgill** teaches that the step of storing the set of simulation results in a results file comprises comparing the second set of keywords submitted to the simulator with the set of simulation results stored in the results file and storing the set of simulation results, which are generated from the simulator, in a results file (Col 12, Lines 54-58 and Col 12, Lines 62-63).

5.12 As per Claim 14, **Huang et al., Blitz** and **Rumbaugh et al.** teach the method of Claim 13. **Huang et al.** teaches the step of displaying the set of simulation results which are stored in the results file includes displaying the set of simulation results via a results viewer. (Col 96, Lines 57-58).

Huang et al., Blitz and **Rumbaugh et al.** do not expressly teach that the step of displaying the set of simulation results which are stored in the results file includes generating a report documenting the set of simulation results via a report generator. **Cowgill** teaches that the step of displaying the set of simulation results which are stored in the results file includes generating a report documenting the set of simulation results via a report generator (Col 12, Lines 54-58).

5.13 As per Claim 17, **Huang et al., Blitz** and **Rumbaugh et al.** teach the device of Claim 16. **Huang et al.** teaches that the device further comprises receiving a set of simulation results from the simulator when the edited data is submitted to the simulator and storing the set of simulation results in a results file (Col 94, Lines 45-46).

5.14 As per Claim 18, **Huang et al., Blitz** and **Rumbaugh et al.** teach the device of Claim 17. **Huang et al., Blitz** and **Rumbaugh et al.** do not expressly teach that the device further comprises monitoring the edited data submitted to the simulator, and comparing the edited data submitted to the simulator with the set of simulation results generated from the simulator. **Cowgill** teaches that the device further comprises monitoring the edited data submitted to the simulator, and comparing the edited data submitted to the simulator with the set of simulation results generated from the simulator (Col 12, Lines 54-58).

5.15 As per Claim 19, **Huang et al., Blitz, Rumbaugh et al.** and **Cowgill** teach the device of Claim 18. **Huang et al., Blitz** and **Rumbaugh et al.** do not expressly teach that the device

further comprises transmitting to a display the set of simulation results which are stored in the results file approximately simultaneously with the monitoring of the set of simulation results. **Cowgill** teaches that the device further comprises transmitting to a display the set of simulation results which are stored in the results file approximately simultaneously with the monitoring of the set of simulation results (Col 12, Lines 54-58).

5.16 As per Claim 21, **Huang et al., Blitz** and **Rumbaugh et al.** teach the simulation system of Claim 20. **Huang et al., Blitz** and **Rumbaugh et al.** do not expressly teach that the simulation system comprises a case builder operatively connected to the case manager and responsive to the at least one of the set of data and the corresponding superset of the set of data which is selected by the operator from the tree like structure of the case manager adapted for allowing the operator to edit the at least one of the set of data and the corresponding superset of the set of data which is selected by the operator from the tree like structure of the case manager thereby generating edited data. **Cowgill** teaches that the simulation system comprises a case builder operatively connected to the case manager and responsive to the at least one of the set of data and the corresponding superset of the set of data which is selected by the operator from the tree like structure of the case manager adapted for allowing the operator to edit the at least one of the set of data and the corresponding superset of the set of data which is selected by the operator from the tree like structure of the case manager thereby generating edited data (Col 12, Lines 34-37).

5.17 As per Claim 25, **Huang et al., Blitz** and **Rumbaugh et al.** teach the method of Claim 24. **Huang et al.** teaches the simulation system further includes the edited data being received in the simulator during the receiving step and the simulator performing the simulation and using the edited data in the simulation during the performing step (Col 96, Lines 35-37).

Huang et al., Blitz and **Rumbaugh et al.** do not expressly teach that the simulation system further includes a case builder operatively interposed between the case manager and the simulator and adapted for editing the selected data generated from the case manager when the selected data is selected by the operator during the selecting step; when the selected data is generated from the case manager in response to the selecting step, editing by the operator the selected data in the case builder generating edited data. **Cowgill** teaches that the simulation system further includes a case builder operatively interposed between the case manager and the simulator and adapted for editing the selected data generated from the case manager when the selected data is selected by the operator during the selecting step; when the selected data is generated from the case manager in response to the selecting step, editing by the operator the selected data in the case builder generating edited data (Col 12, Lines 34-37).

5.18 As per Claim 27, it is rejected based on the same reasoning as Claim 25, supra. Claim 27 is device claim reciting the same limitations as Claim 25, as taught throughout by **Huang et al., Blitz, Rumbaugh et al.** and **Cowgill.**

6. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Huang et al.** (U.S. Patent 6,151,582), in view of **Gunesekara** (U.S. Patent 6,018,497), **Blitz** (U.S. Patent

6,047,293), and **Rumbaugh et al.** (Object oriented modeling and Design, 1991), and further in view of **Cowgill** (U.S. Patent 5,835,566).

6.1 As per Claim 15, **Huang et al.** teaches a simulation system responsive to a plurality of sets of input data generating a set of simulation results in response to the simulation (Col 96, Lines 35-37; Col 95, Lines 63-64); , and displaying the set of simulation results (Col 96, Lines 57-58); comprising:

a case manager means for organizing and managing the plurality of sets of input data being used by the simulation system, the case manager means including a plurality of sets of case scenarios and a plurality of supersets of case scenarios wherein each set and superset is a test data file each superset defining a case scenario of its related set (Fig. 52; Col 94, L42-45: scenario manager; scenarios contain edited data, results of analysis, graphs, charts and performance metrics; the edited data are interpreted as test data file; Col 96, L43-48: decision and parameter settings; parameter settings will be displayed in the editable screens; these screens will be accessible during simulation run so the user can interrupt the simulation and modify the parameters interactively; the examiner interprets the parameters to constitute the test data); for performing a simulation (Col 95, Lines 63-64: supply chain wide performance simulator to monitor the effects due to the system dynamics);

an operator selecting one or more of the case scenarios in the case manager (Col 95, Lines 2-4);

case builder means for receiving the one or more of the case scenarios selected by the operator, editing or changing a set of data disposed within the selected case scenarios in response

to editing actions taken by the operator, and, responsive thereto, generating a set of edited case scenarios (Col 94, Lines 44-46; Col 96, L44-48);

run manager means responding to the set of edited case scenarios from the case builder means for submitting the edited case scenarios to a simulator, the simulator responding to the edited case scenarios from the run manager means by executing and thereby generating the set of simulation results, the set of simulation results from the simulator being stored in a results file (Col 96, Lines 35-37; Col 96, L45-48); and

results viewer means for displaying the set of simulation results generated by the simulator, the results viewer displaying the set of simulation results and any instantaneous changes being made to the set of simulation results at any point in time (Col 96, Lines 57-58).

Huang et al., does not expressly teach a simulation system responsive to a plurality of sets of input data for simulating an earth formation located in the vicinity of an oilfield reservoir. **Gunesekara** teaches a simulation system responsive to a plurality of sets of input data for simulating an earth formation located in the vicinity of an oilfield reservoir (Col 1, Line 21 to Col 2, Line 3). It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the simulation system of **Huang et al.** with the simulation system of **Gunesekara** that included a system responsive to a plurality of sets of input data for simulating an earth formation located in the vicinity of an oilfield reservoir because that would facilitate generating accurate information relating to the transmissibility properties and flow properties of the cells imposed on the earth formation (Col 1, Lines 23-28; Col 1, Lines 54-55).

Huang et al. and **Gunesekara** do not expressly teach said plurality of sets and plurality of supersets being organized in a hierarchical, tree-like structure, having a root and one or more leaves. **Blitz** teaches said plurality of sets and plurality of supersets being organized in a hierarchical, tree-like structure (Abstract, L2-11: storage and searching of parameter data used for testing; the data manager storing nested levels of data in the form of a binary tree; Abstract, L14-18: each container has a search mode which searches the tree for the named data; Fig. 4: shows the tree structure of test data; Figs 7 and 8: show the tree structure of data; Col 5, L54-56: the Excel spreadsheets contain all the data required for a test; the data need to be stored in the data manager in such a way that it may be retrieved quickly and accurately; Col 6, L55-66: graphical illustration of nested data; nested tree in the data manager; each data has a specific location in the tree determined by the layout rules of the binary tree; Col 7, L20-23 and 26-37); tree-like structure having a root and one or more leaves (inherent).

Huang et al., Gunesekara and **Blitz** do not expressly teach the plurality of sets and plurality of supersets being organized in a hierarchical, non-conventional tree-like structure, having a root and one or more leaves, the tree like structure being non-conventional in that some of the case scenarios being supersets of other of the case scenarios in the tree-like structure with the supersets underlying corresponding ones of the sets in the tree like structure, such that one or more of the sets is situated between the root and the corresponding superset. **Rumbaugh et al.** teaches the plurality of sets and plurality of supersets being organized in a hierarchical, non-conventional tree-like structure, having a root and one or more leaves, the tree like structure being non-conventional in that some of the case scenarios being supersets of other of the case scenarios in the tree-like structure with the supersets underlying corresponding ones of the sets in

the tree like structure, such that one or more of the sets is situated between the root and the corresponding superset (Page 39, Para 3 and Para 5; Fig. 3.23).

Huang et al., Gunesekara, Blitz and **Rumbaugh et al.** do not expressly teach case builder means for receiving the one or more of the case scenarios selected by the operator, editing or changing a set of data disposed within the selected case scenarios in response to editing actions taken by the operator, and, responsive thereto, generating a set of edited case scenarios. **Cowgill** teaches case builder means for receiving the one or more of the case scenarios selected by the operator, editing or changing a set of data disposed within the selected case scenarios in response to editing actions taken by the operator, and, responsive thereto, generating a set of edited case scenarios (Col 12, Lines 34-37). It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the simulation system of **Huang et al., Gunesekara, Blitz** and **Rumbaugh et al.** with the simulation system of **Cowgill** that included case builder means for receiving the one or more of the case scenarios selected by the operator, editing or changing a set of data disposed within the selected case scenarios in response to editing actions taken by the operator, and, responsive thereto, generating a set of edited case scenarios because that would allow the user to create test cases and schedule the test cases for execution (Col 12, Lines 38-40).

Huang et al., Gunesekara, Blitz and **Rumbaugh et al.** do not expressly report generator means for generating one or more reports which record the set of simulation results. **Cowgill** teaches report generator means for generating one or more reports which record the set of simulation results (Col 12, Lines 54-58).

Response to Arguments

7. Applicant's arguments filed on May 8, 2008 have been fully considered. New claim rejections re included in this Office Action in response to Applicant's arguments.

7.1 As per the applicants' argument that "Huang never discusses storing the scenarios in tree-like structures; Huang discloses that data domains are presented in tree-like structures; a scenario is not equivalent to a data domain; Huang fails to teach or suggest storing scenarios (sets and supersets) in a tree-like structure", the Examiner has used a new reference **Blitz**.

Blitz teaches the sets and supersets of test data files being stored in the case manager in the form of a hierarchical, tree like structure, having a root and one or more leaves (Abstract, L2-11: storage and searching of parameter data used for testing; the data manager storing nested levels of data in the form of a binary tree; Abstract, L14-18: each container has a search mode which searches the tree for the named data; Fig. 4: shows the tree structure of test data; Figs 7 and 8: show the tree structure of data; Col 5, L54-56: the Excel spreadsheets contain all the data required for a test; the data need to be stored in the data manager in such a way that it may be retrieved quickly and accurately; Col 6, L55-66: graphical illustration of nested data; nested tree in the data manager; each data has a specific location in the tree determined by the layout rules of the binary tree; Col 7, L20-23 and 26-37).

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Kandasamy Thangavelu whose telephone number is 571-272-3717. The examiner can normally be reached on Monday through Friday from 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard, can be reached on 571-272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to TC 2100 Group receptionist: 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Kandasamy Thangavelu/
Art Unit 2123
August 2, 2008